

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: M. Couturier)	
Serial No: 10/547,443)	
Filed: November 7, 2005)	Examiner: O. Ojurongbe
For: Erucamide-Free Closure and Liner)	Group Art Unit: 1796
Composition)	Confirm. No.: 1200

Mail Stop: Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Appellant hereby appeals to the Board of Patent Appeals and Interferences from the decision of the Examiner mailed September 15, 2008 finally rejecting claims 22-34, all of the claims in this application, and submits the following Brief in support of the appeal.

A **zero** month extension of time is requested (or such extension as required to make this document and any accompanying documents timely). The Commissioner is hereby authorized to charge the Appeal Brief fee of **\$540**, plus any other fees required by this communication, including extension fees, to Deposit Account No. **07-1756**.

Respectfully submitted,
/Stephan P. Williams/

Customer No. 33250
Patent Department
W.R. Grace & Co.-Conn.
62 Whittemore Avenue
Cambridge, MA 02140

Stephan P. Williams
Reg. No. 28,546
Attorney for Applicants
(617) 498-4919

TABLE OF CONTENTS

REAL PARTY IN INTEREST	3
RELATED APPEALS AND INTERFERENCES	4
JURISDICTIONAL STATEMENT	5
STATUS OF CLAIMS	6
STATUS OF AMENDMENTS	7
SUMMARY OF CLAIMED SUBJECT MATTER	8
GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL.....	9
ARGUMENT.....	10
CLAIMS APPENDIX.....	16
EVIDENCE APPENDIX	19
RELATED PROCEEDINGS APPENDIX.....	20

REAL PARTY IN INTEREST

This application is assigned to W.R. Grace & Co.-Conn., with a principal place of business in Columbia, Maryland. The real party in interest is W.R. Grace & Co.-Conn.

RELATED APPEALS AND INTERFERENCES

There are and have been no prior or pending appeals, interferences or judicial proceedings known to appellant, appellant's legal representative, or appellant's assignee that may be related to, directly affect, be directly affected by or have a bearing on the Board's decision in this appeal. However, appellant has a related parent application, namely USSN 10/379,746, that has been granted as US 6,806,313. A terminal disclaimer has been filed in this application that references the aforementioned patent.

JURISDICTIONAL STATEMENT

The Board has jurisdiction under 35 U.S.C. §134(a). The Examiner mailed a final rejection on September 15, 2008, setting a three-month shortened statutory period for response that would expire on December 15, 2008. Appellant timely submitted an Amendment and Response on November 11, 2008. The Examiner issued an Advisory Action on November 20, 2008, entering the amendment for purposes of appeal, but maintaining the rejection. Appellant timely submitted a Notice of Appeal and Pre-Appeal Brief Request for Review on November 21, 2008, along with the requisite fee. A Notice of Panel Decision from Pre-Appeal Brief Review was issued on December 10, 2008, maintaining the rejection. The time for filing an appeal brief expires January 21, 2009, two months from the filing of the Notice of Appeal. This appeal brief is filed on January 13, 2008.

STATUS OF CLAIMS

Claims 1 to 21 have been cancelled.

Claims 22 to 34 stand rejected.

The claims under appeal are claims 22 to 34. A copy of the claims under appeal is set forth in the attached Appendix.

STATUS OF AMENDMENTS

All amendments have been entered (see Advisory Action of November 20, 2008 entering the amendment of November 11, 2008).

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed to a closure for a food or beverage container, wherein the closure includes a sealant liner [Spec., p. 5, lines 7-8; p. 7, lines 2-3 and 11-14] molded from a composition that includes a polymer component, which is essentially free of erucamide and other unsaturated amide, a lubricant comprising an organopolysiloxane having an average molecular weight not less than 40,000 and a viscosity of at least 50,000 cst, and a slip aid comprising a saturated amide and an oxidized polyethylene. [Spec., p. 2, lines 3-21; p. 4, line 9; p. 5, lines 9-16.] Thus, the sealant liner composition must include an organopolysiloxane, a saturated amide and an oxidized polyethylene, in addition to the matrix polymer and it must be essentially free of erucamide or other unsaturated amide. It is the specific combination of organopolysiloxane, saturated amide and oxidized polyethylene that provides the closure/sealant liner with reduced off-odor/flavor while maintaining a sufficiently low removal torque. [Spec., p. 7, lines 7-9; p. 8, lines 3-6.]

As shown in Table 1 (Example 1), no one component alone provides acceptable removal torque – see D (stearamide alone), E (oxidized polyethylene alone), and F (polysiloxane alone) compared to B (erucamide alone). [Spec., p. 6, lines 6-9.] As shown in Table 3, the composition 3A, which includes the claimed combination of agents, exhibits excellent removal torque as good or better than erucamide (3B) [Spec., p. 8, lines 1-6], without the off-odor/flavor characteristics of erucamide (or other unsaturated amides) [Spec., p. 7, lines 7-9; p. 10, lines 11-15].

[Note: When reviewing the original specification, please note that the specification was amended in several paragraphs to correct an obvious error by changing "unsaturated" amide to "saturated" amide. (Amdt. filed June 16, 2008) Accordingly, the Board should take account of these corrections when reviewing the specification for support.]

GROUNDΣ OF REJECTION TO BE REVIEWED ON APPEAL

Claims 22-28 and 33 stand rejected under 35 U.S.C. §102(b) as anticipated by Knight (EP 0129309), as evidenced by Burdock (Oxidized Polyethylene Wax).

Claim 29 stands rejected under 35 U.S.C. §103(a) as unpatentable over Knight, as evidenced by Burdock, in view of White (US 5,955,163).

Claims 30-32 and 34 stand rejected under 35 U.S.C. §103(a) as unpatentable over Knight, as evidenced by Burdock, in view of Akao (EP 0569950).

While claims 30 and 33 (and claims 31 and 34 dependent therefrom) were rejected under 35 U.S.C. §112 for improper dependency, appellant believes this rejection was overcome by entry of the amendment to claims 30 and 33 filed on November 11, 2008, which amendment corrected an obvious error. Accordingly, appellant believes this rejection has been withdrawn and is not subject to appeal.

ARGUMENT

The present invention is directed to a closure for a food or beverage container, wherein the closure includes a sealant liner molded from a composition that includes a polymer component, which is essentially free of erucamide and other unsaturated amide, a lubricant comprising an organopolysiloxane, and a slip aid comprising a saturated amide and an oxidized polyethylene. Thus, the liner composition must include, in addition to the matrix polymer, an organopolysiloxane, a saturated amide and an oxidized polyethylene, and it must be essentially free of erucamide or other unsaturated amide. None of the cited references teach or suggest a sealant liner composition that includes the specific combination of an organopolysiloxane, a saturated amide and an oxidized polyethylene, as claimed. However, it is this specific combination that provides the liner with reduced off-odor/flavor while maintaining a sufficiently low removal torque.

Errors in the Asserted Rejections

All of the §102 and §103 rejections are based upon Knight (EP 0129309) as the primary reference. However, Knight does not teach a composition that is free of unsaturated amide and that includes an oxidized polyethylene in combination with an organopolysiloxane and a saturated amide. Burdock merely provides a definition of oxidized polyethylene.

The Rejection Under 35 U.S.C. §102(b)

With respect to the anticipation rejection (the only rejection applied against claims 22-28 and 33), the Examiner has attempted to select specific elements within the disclosure of Knight and to combine those elements in a particular way to arrive at the claimed invention. However, since even the combined elements do not anticipate the claimed invention, the Examiner has suggested that the missing

element –oxidized polyethylene – is present by asserting an inherency argument – namely, that the polyethylene wax included in the Knight compositions would oxidize to produce the oxidized polyethylene required by the claimed composition. The problem is that this inherency position is contradicted by the art.

Appellant has reproduced in the table below a side-by-side comparison of the sealant liner composition used in the claimed closure and the composition exemplified in the last paragraph of Knight Example 2, which is the Knight composition closest to the sealant liner composition utilized in the claimed closure.

<u>Claimed Sealant Liner Composition</u>	<u>Knight Example 2 Composition</u>
Thermoplastic polymer (e.g., EVA)	Ethylene vinyl acetate copolymer
Organopolysiloxane	Polysiloxane
Saturated amide (e.g., behenamide)	Oleamide (an unsaturated amide)
Oxidized polyethylene	Polyethylene wax + polyethylene (both are polyethylene – wax has lower mol. wt.)
(antioxidant used in exemplified comps)	Thermal stabilizer (i.e., an antioxidant)
Free of unsaturated amide	(oleamide is unsaturated amide)

As can be seen, the only specific Knight composition that is closest to the claimed invention differs therefrom in three important respects. First, it does not include a saturated amide as required by the claims. Second, it is not free of unsaturated amide as required by the claims, but includes an unsaturated amide (oleamide). Third, it does not include oxidized polyethylene as required by the claims, but rather includes two forms of polyethylene (lower and higher MW). Thus, it should be clear that this example does not anticipate the claimed composition, nor do any other examples in Knight.

While Knight generally teaches that stearamide, a saturated amide, may be employed as a fatty amide, Knight does not disclose the specific combination of stearamide with organopolysiloxane and oxidized polyethylene, as claimed. Thus,

although Knight includes a saturated amide in a list of potential materials that may be employed, this general disclosure is not an anticipatory express disclosure of the specific combination as claimed. To anticipate, one must have identity in disclosure, not just a possibility based on suggestion. Moreover, since Knight has only exemplified an unsaturated amide (oleamide) in the examples, these examples, clearly do not anticipate the claimed invention. In fact, the use of oleamide (an unsaturated amide) in the examples teaches away from the present invention, which specifies that the composition must be essentially free of unsaturated amide.

With respect to the inherency position, the Examiner is clearly incorrect in hypothesizing that the polyethylene wax included in the Knight compositions would oxidize to produce the oxidized polyethylene required by the claimed composition. First, it is well-known that commercially available polyethylenes typically include thermal stabilizers or antioxidants. See, for example, Kirk-Othmer Encyclopedia of Chemical Technology, "Antioxidants, Polymers," Vol. 3, p. 102 (2002), of record¹, particularly section 8.1 on page 118 ("Low concentrations of stabilizers (<0.1%) are often added to polyethylene"). While the Examiner has referred to Winslow², a 1958 article, for its recognition that polyethylene oxidizes, the Examiner has ignored Winslow's teaching that antioxidant compounds may be added to polyethylene to counteract the oxidation (see p. 319, col. 2, lines 5-7; p. 320, last paragraph). Thus, Winslow essentially confirms what has become the present day common usage of antioxidants in polyethylene resin.

Second, and more importantly, all of the Knight examples include a thermal stabilizer as an additive. This stabilizer is included to prevent oxidation of the components included in the Knight compositions. Thus, the polyethylene wax would not form oxidized polyethylene, as the Examiner hypothesized, because the

¹ Cited by appellant with Response submitted on November 11, 2008.

² Winslow is cited on p. 8 of the Final Rejection in the Examiner's "Response to Arguments", but is not included as part of the prior art applied in any rejection.

thermal stabilizer present in the composition would inhibit oxidation. The Examiner's oxidation hypothesis is simply contrary to the available evidence and cannot support a theory of anticipation absent a clear and unambiguous teaching in the art.

The Federal Circuit has provided clear guidelines for establishing inherency in *In re Robertson*, 49 USPQ.2d 1949, 1950-51 (Fed. Cir. 1999):

To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.* at 1269, 20 USPQ2d at 1749 (quoting *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (C.C.P.A. 1981). [Emphasis added.]

Clearly, the Examiner has not established, beyond mere possibility or conjecture, that the Knight compositions necessarily include oxidized polyethylene and that this would be recognized by persons of ordinary skill. Accordingly, Knight does not anticipate the claimed invention because Knight does not disclose a composition that includes oxidized polyethylene. In addition, Knight does not anticipate because Knight does not disclose a specific composition that includes a saturated amide, free of unsaturated amide, in combination with a silicone and oxidized polyethylene.

It is noted that the Examiner has further argued in the Advisory Action that Knight does not indicate that the stabilizer is an essential part of the Knight composition. Presumably, this statement is designed to support a further theory that one might remove the stabilizer from the exemplified compositions and thereby cause the polyethylene included in the Knight composition to oxidize. While this further explanation, at best, might be formulated into a §103 rejection (which has

not been asserted against claim 22), it begs the question why a skilled worker would be motivated to leave out a material that prevents oxidation of the components in the composition, particularly when all of the Knight examples include it, thus suggesting it is an essential component.

The Rejections Under 35 U.S.C. §103(a)

It is noted that the Examiner has not rejected claims 22-28 and 33 under 35 U.S.C. §103 as obvious over Knight. In any event, applicant respectfully urges that such a rejection would be improper. As discussed above, Knight does not disclose the use of oxidized polyethylene in the Knight compositions. Rather, Knight uses a polyethylene wax. Knight does not suggest that the polyethylene wax component can or should be replaced with oxidized polyethylene, nor does any other reference make such a suggestion. In addition, Knight's suggestion, and apparent preference, for using an unsaturated amide (oleamide) is a clear teaching away from the present invention, which requires that the composition be free of unsaturated amide. Finally, there is no suggestion in Knight to use the three specific components – saturated amide, silicone, and oxidized polyethylene – in combination, as claimed.

While the Examiner has rejected claims 29, 30-32 and 34 under 35 U.S.C. §103, these rejections are primarily based on Knight, as applied to claim 22. As discussed above, Knight does not render claim 22 obvious, primarily because Knight does not disclose or suggest the use of oxidized polyethylene (and, as pointed out earlier, the Examiner's oxidation hypothesis is erroneous given the presence of stabilizer in the Knight compositions). The secondary reference White was cited against claim 29 purportedly for its teaching of styrene-ethylene butylene-styrene copolymer (SEBS) in bottle crown gaskets. The secondary reference Akao was cited against claims 30-32 and 34 purportedly for its teaching that behenic acid amide and stearic acid amide are equivalent (at least as lubricants used in resin films for

packaging photographic photosensitive articles). Clearly, neither of the secondary references makes up for the deficiency of Knight. In other words, neither reference suggests that one might modify the Knight composition by replacing the polyethylene wax with oxidized polyethylene.

Accordingly, for the reasons presented herein, appellants respectfully urge that the rejections asserted by the Examiner should be reversed.

CLAIMS APPENDIX

1 to 21 (canceled).

22. A closure for a food or beverage container, wherein the closure includes a sealant liner molded from a composition comprising

(A) a polymer component, which is essentially free of erucamide and other unsaturated amide, said polymer component comprising a thermoplastic polymer selected from the group consisting of polyethylene, ethylene copolymer with other lower alkenes, polypropylene, thermoplastic rubber, poly (ethylene propylene) copolymer, acid modified ethylene propylene copolymer, styrene butadiene rubber, carboxylated styrene butadiene block co-polymer, polyisoprene, styrene isoprene styrene block copolymer, styrene butadiene styrene block copolymer, styrene ethylene butylene styrene block copolymer, polystyrene block polyethylene/propylene copolymer, ethylene vinyl acetate copolymer or terpolymer, ethylene acrylate copolymer or terpolymer, ethylene vinyl alcohol copolymer, butyl rubber, poly(vinyl chloride) polymer, and mixtures thereof;

(B) a lubricant comprising an organopolysiloxane, said organopolysiloxane having an average molecular weight not less than 40,000, said organosiloxane being present in an amount not less than 0.01 parts and not greater than 10 parts based on 100 parts of said polymer component (A), and said organopolysiloxane having a viscosity of at least 50,000 cst; and

(C) a slip aid comprising a saturated amide and an oxidized polyethylene, said slip aid being present in an amount not less than 0.01 parts and not greater than 8 parts based on 100 parts of said polymer component (A), said amide having an iodine value no greater than 5 in accordance with ASTM D2075-92.

23. A closure according to claim 22, wherein said saturated amide is selected from the group consisting of behenamide, stearamide, arachidamide, palmitamide, myristamide, lauramide and ethylene bis-stearamide.
24. A closure according to claim 23, wherein said polymer component comprises an ethylene vinyl acetate copolymer in an amount not less than 5 parts and not greater than 100 parts, based on 100 parts of said polymer component (A).
25. A closure according to claim 23, wherein said polymer component comprises polyethylene, polypropylene, or a mixture thereof
26. A closure according to claim 23, wherein said polymer component comprises a copolymer of polyethylene and polypropylene.
27. A closure according to claim 23, wherein said polymer component comprises ethylene vinyl acetate copolymer and poly(ethylene propylene) copolymer.
28. A closure according to claim 23, wherein said polymer component comprises poly(vinyl chloride) polymer.
29. A closure according to claim 23, wherein said polymer component comprises polyethylene, polypropylene, or a mixture thereof; and further comprises styrene-ethylene butylene-styrene block copolymer.
30. A closure according to claim 22, wherein said saturated amide is behenamide.
31. A closure according to claim 30, wherein said organopolysiloxane is poly(dimethyl) siloxane.
32. A closure according to claim 22, wherein said organopolysiloxane is poly(dimethyl) siloxane.

33. A closure according to claim 22, wherein said saturated amide is stearamide.
34. A closure according to claim 33, wherein said organopolysiloxane is poly(dimethyl) siloxane.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None